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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,671	11/30/2001	Hirohiko Murakami	011610	7875

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EXAMINER

JOLLEY, KIRSTEN

ART UNIT PAPER NUMBER

1762

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,671

Applicant(s)

MURAKAMI ET AL.

Examiner

Kirsten C Jolley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed June 1, 2004 have been fully considered but they are not persuasive.

Applicant argues that there is no need, teaching or suggestion for producing a *porous* SOG film as claimed in Kennedy et al., and that the reference has no intention of obtaining the porous film by heat-treating the materials in the presence of the surfactant. The Examiner notes that the claims, as currently written, do not require a degree of porosity of the resulting SOG film. While the porosity of the film of Applicant's invention may be greater than that of Kennedy et al.'s film, the claims only require that a porous film is formed. The Examiner maintains the position that the SOG film of Kennedy et al. would necessarily be porous, as silica material is necessarily porous at least to a small degree. Additionally, with the respect to the surfactants in Kennedy et al.'s solution, Applicant argues that the organofluoro surfactants are used for decreasing the surface tension of the coating solution and decreasing the probability of formation of bubble film defects. Again, it is the Examiner's position that, even with the inclusion of the surfactants taught by Kennedy et al., the SOG of Kennedy et al. would be porous at least to a degree. It is noted that the independent claims do not require the use of any particular surfactants.

With respect to claim 2, Applicant argues that the effect of the present invention is different from that of Kennedy et al., and that in the instant invention the porous films constituting the laminate are put in layers while the holes in neighboring layers deviate

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from each other such that holes in the upper film have almost no communication with those in the lower film, resulting in almost no through hole in the multi-layered film. The Examiner notes that such a structure is not claimed.

With respect to claim 6, Applicant argues that Kennedy et al. does not teach the purpose of its two or three bake steps. It is well settled that the prior art need not disclose the same purpose for a claimed method in order to establish its obviousness under 35 USC 103. In re Dillon, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990), cert. denied, 500 US 409 (1991).

With respect to claim 7, Applicant argues that if the temperature is less than 350 degrees C, it is difficult to obtain a porous film having a desired low relative dielectric constant. It is noted that Applicant does not claim a required dielectric constant.

As to claims 13-14, Applicant argues that the surfactants in the invention are added for the purpose of forming SOG film, whereas the surfactants of the cited reference is for the purpose of decreasing the probability of formation of bubble film defects. The Examiner notes that a SOG film is formed as a result of Kennedy et al.'s invention (see Abstract). Further, the claimed surfactants are known to reduce surface tension of a coating liquid, similar to those listed as exemplary surfactants by Kennedy et al.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al. (US 6,506,497).

The rejections over Kennedy et al. are maintained for the reasons set forth in the prior Office action as well as for the reasons discussed in section 1 above.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

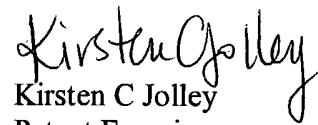
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Thursday and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kirsten C Jolley
Patent Examiner
Art Unit 1762

kcj